

Golder Associates Inc.

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RECEIVED**DEC 08 1995****SUPERFUND DIVISION**

December 7, 1995

Our Ref: 943-2848.601

U.S. Environmental Protection Agency
Region VII
WSTM/SPFD/REML
726 Minnesota Avenue
Kansas City, Kansas 66101



40056620
SUPERFUND RECORDS

TO: West Lake Ld. Co.
#: MB0079900432
task: 10.9 out #2
thar: progress Report
12-7-95

Attention: Mr. Steven Kinser

RE: MONTHLY PROGRESS REPORT - NOVEMBER 1995
WEST LAKE (BRIDGETON) LANDFILL
OPERABLE UNIT 2 RI/FS

Dear Mr. Kinser:

On behalf of Laidlaw Waste Systems, Inc. (Laidlaw), Golder Associates Inc. (Golder) has prepared the following progress report in accordance with Section XIII, Paragraph 39 of the Administrative Order on Consent (Consent Order), EPA Docket No. VII-94-F-0025. The progress report describes activities conducted in November 1995.

I. ACTIONS TAKEN TO COMPLY WITH THE CONSENT ORDER

The following activities were performed in November 1995:

No additional drilling activities were performed in November. The following table summarizes the drilling and installation activities completed as part of Phase II piezometer, soil boring, and leachate riser drilling. The table is unchanged from October.

Piezometer/Borehole Designation	Total Depth (feet below ground surface)	Soil/Rock Sampling Interval (feet below ground surface)	Screened Interval (feet below ground surface)
LR-100	20.0	0.0-28.0	19.7-25.5
LR-101	55.0	0.0-55.0	N/A
LR-102	76.0	0.0-76.0	54.9-59.7
LR-103	38.0	0.0-38.0	38.2-39.0
LR-104	38.0	0.0-38.0	28.6-38.2
LR-105	38.0	0.0-38.0	26.2-36.0

Piezometer/Borehole Designation	Total Depth (feet below ground surface)	Soil/Rock Sampling Interval (feet below ground surface)	Screened Interval (feet below ground surface)
PZ-300-AS	20.0	0.0-20.0	9.9-19.7
PZ-300-AD	42.8	30.0-42.8	37.1-41.9
PZ-300-SS	95.0	0.0-95.0	83.8-93.7
PZ-301-SS	161.5	0.0-160.3	150.9-160.7
PZ-302-AS	24.0	0.0-24.0	12.2-22.0
PZ-302-AI	43.0	22.0-42.0	32.6-42.4
PZ-303-AS	26.5	0.0-26.0	16.0-25.8
PZ-304-AS	28.0	0.0-28.0	17.1-26.9
PZ-304-AI	50.0	28.0-50.0	39.0-48.8
PZ-305-AI	64.0	36.0-64.0	53.2-63.0
SB-01	20.0	0.0-20.0	N/A
SB-02	18.0	0.0-18.0	N/A
SB-03	16.0	0.0-16.0	N/A
SB-04	14.0	0.0-14.0	N/A

Notes:

N/A: Screen not installed. At LR-101, no leachate was encountered.

Consistent with the approach presented in the final "RI/FS Work Plan," the deepest boring in each bedrock piezometer cluster was continuously sampled. At the alluvial piezometer clusters, the shallowest boring was continuously sampled from the surface to total depth. At the intermediate depth alluvial boring, continuous sampling was begun below the total depth of the shallow boring. Other borings in a cluster were sampled only near the screened interval.

Activities conducted in November include piezometer development, slug testing, and collection of monthly water levels.

II. VALIDATED RESULTS RECEIVED

The attached Table 1 lists water level data collected from the piezometers installed as part of the Operable Unit 2 RI/FS as well as previously existing monitoring wells near the active solid waste landfill. Table 1 includes data collected from June through November 1995.

III. WORK PLANNED DURING NOVEMBER AND DECEMBER 1995

Activities planned for December 1995 and January 1996 include the following:

- ▶ Continuation of the Technical Memorandum on Physical Characterization; and,
- ▶ Collection of monthly water levels.

A November 29, 1995 letter to EPA discussed the rationale for a proposed extension in delivery of the Technical Memorandum on Physical Characterization. EPA is currently evaluating the proposed schedule extension.

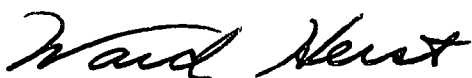
IV. MATERIAL PROBLEMS ENCOUNTERED OR ANTICIPATED MATERIAL DELAYS

No material delays were encountered in November, and none are anticipated for December or January, other than the proposed schedule extension for the Technical Memorandum on Physical Characterization..

If you have any questions or comments, please contact Mr. Doug Borro, the Respondent's designated Project Coordinator, or the undersigned.

Sincerely,

GOLDER ASSOCIATES INC.



Ward E. Herst, CPHG, CEM
Program Director - Hydrology
Associate

WEH/ked

cc: Michael Hockley, Esq., Spencer Fane Britt & Browne
Doug Borro, Laidlaw Waste Systems, Inc.
Doug Wagner, Laidlaw Waste Systems, Inc.
Larry Giroux, Laidlaw Waste Systems, Inc.
Jalal El-Jayyoubi - Missouri Department of Natural Resources

TABLE 1
GROUNDWATER, LEACHATE AND SURFACE WATER ELEVATION SUMMARY
WEST LAKE LANDFILL OU-2

Monitoring Location	Date					
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995
	Groundwater Elevation					
Shallow Alluvial Piezometers						
PZ-112-AS	436.12	435.12	434.67	432.84	432.13	431.84
PZ-113-AS	435.64	435.30	434.63	432.91	432.19	431.81
PZ-114-AS	435.94	435.35	434.90	433.06	432.11	431.93
PZ-205-AS	434.41	434.33	434.06	432.52	431.90	431.66
PZ-207-AS	435.94	435.41	434.91	433.02	432.29	431.87
PZ-300-AS	NA	NA	NA	NA	436.41	435.50
PZ-302-AS	NA	NA	NA	NA	432.34	432.08
PZ-303-AS	NA	NA	NA	NA	432.19	432.01
PZ-304-AS	NA	NA	NA	NA	432.19	431.91
Intermediate Alluvial Piezometers						
PZ-302-AI	NA	NA	NA	NA	432.16	432.00
PZ-304-AI	NA	NA	NA	NA	432.19	431.98
PZ-305-AI	NA	NA	NA	NA	431.10	431.80
Deep Alluvial Piezometers						
PZ-113-AD	435.68	435.13	433.74	432.89	432.28	431.82
PZ-300-AD	NA	NA	NA	NA	432.89	432.78
St. Louis/Upper Salem Hydrologic Unit Piezometers						
PZ-100-SS	405.36	416.06	415.23	414.35	414.04	413.85
PZ-101-SS	393.23	394.58	393.37	390.00	388.96	387.58
PZ-102-SS	413.54	Inactive	Inactive	Inactive	Inactive	Inactive
PZ-102R-SS	403.09	424.30	424.87	422.80	421.99	421.63
PZ-103-SS	363.03	373.02	363.73	360.95	360.69	361.05
PZ-104-SS	340.67	360.04	366.22	361.01	360.34	360.41
PZ-105-SS	336.26	339.83	352.45	346.80	343.23	342.76
PZ-106-SS	359.72	357.60	364.20	349.41	350.41	350.01
PZ-107-SS	434.52	434.30	434.00	432.36	431.91	431.57
PZ-108-SS	368.99	368.99	367.02	352.14	355.88	356.78
PZ-109-SS	370.70	373.74	360.45	359.20	354.64	355.12
PZ-110-SS	413.76	433.53	433.27	431.57	430.93	430.58
PZ-113-SS	435.70	435.23	434.79	433.00	432.29	431.94
PZ-115-SS	426.75	424.83	424.18	417.06	413.09	411.71

Notes provided on Page 3

TABLE 1
GROUNDWATER, LEACHATE AND SURFACE WATER ELEVATION SUMMARY
WEST LAKE LANDFILL OU-2

Monitoring Location	Date					
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995
	Groundwater Elevation					
St. Louis/Upper Salem Hydrologic Unit Piezometers—Continued						
PZ-116-SS	NA	346.79	356.46	338.17	333.08	331.43
PZ-200-SS	415.05	415.45	415.59	414.38	413.34	412.78
PZ-201-SS	456.42	455.53	454.86	453.55	453.14	452.98
PZ-201A-SS	415.03	414.63	414.38	412.94	412.85	412.57
PZ-202-SS	444.36	444.78	444.14	441.33	440.20	439.70
PZ-203-SS	(Dry)	(Dry)	(Dry)	(Dry)	(Dry)	(Dry)
PZ-204-SS	442.82	441.49	438.10	431.82	429.64	430.57
PZ-204A-SS	NA	405.65	405.53	404.05	403.82	403.55
PZ-205-SS	424.46	424.04	423.45	421.75	421.69	421.28
PZ-206-SS	420.04	419.04	418.22	415.49	415.34	415.19
PZ-208-SS	NA	436.44	435.60	431.63	429.86	428.83
PZ-300-SS	NA	NA	NA	NA	428.62	428.32
PZ-301-SS	NA	NA	NA	NA	358.09	357.19
PZ-1201-SS	NA	392.33	365.30	377.98	375.25	374.88
MW-1204	333.83	330.01	357.27	305.57	324.30	303.18
MW-1205	352.28	357.38	296.81	341.10	347.04	317.88
MW-1206	368.19	367.12	367.86	351.67	361.31	362.46
Deep Salem Piezometers						
PZ-100-SD	394.61	370.68	381.79	366.35	363.78	364.43
PZ-104-SD	359.05	356.64	362.97	344.33	341.68	341.90
PZ-106-SD	358.64	353.52	361.98	348.44	346.40	347.38
PZ-111-SD	373.70	423.87	428.55	432.22	431.90	431.47
Keokuk Piezometers						
PZ-100-KS	438.17	438.93	437.84	434.72	433.90	433.67
PZ-104-KS	444.63	444.74	444.27	441.98	440.99	440.77
PZ-106-KS	442.18	442.51	442.48	440.30	439.47	439.02
PZ-111-KS	441.58	441.91	442.01	440.39	439.68	439.14
Leachate Risers						
LR-100	NA	NA	NA	NA	450.68	450.42
LR-102	NA	NA	NA	NA	454.07	452.38

Notes Provided on Page 3

TABLE 1
GROUNDWATER, LEACHATE AND SURFACE WATER ELEVATION SUMMARY
WEST LAKE LANDFILL OU-2

Monitoring Location	Date					
	June 27, 1995	July 26, 1995	Aug. 26, 1995	Sept. 30, 1995	Oct. 30, 1995	Nov. 18, 1995
	Groundwater Elevation					
Leachate Risers--Continued						
LR-103	NA	NA	NA	NA	432.10	431.86
LR-104	NA	NA	NA	NA	432.04	432.20
LR-105	NA	NA	NA	NA	451.81	452.44
Staff Gauges						
SG-8	NA	NA	NA	NA	435.08	435.46
SG-9	NA	NA	NA	NA	435.08	435.46

NOTES:

NA = Not available. Water level data was not collected on the indicated date either because the piezometer, leachate riser, or staff gauge had not yet been installed, or development was not yet completed.

PZ-102-SS was replaced by PZ-102R-SS, and is inactive.

LR-101 was not installed because leachate was not present.

All elevations provided in feet above Mean Sea Level (MSL)